

II. AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all previous listings.

1.-26. (Canceled)

27. (New) A seal assembly for sealing against a rotatable component having a longitudinal axis, the seal assembly comprising:

a leaf seal including a plurality of staggered leaf seal members, each leaf seal member including:

a free portion arranged at an acute angle relative to the longitudinal axis of the rotatable component, and

a fixed portion that is angled relative to the free portion; and

a support having a substantially frusto-conically shaped support portion facing a high pressure side of the leaf seal for supporting the free portion from a radially inward position relative to the free portion and a mount portion for coupling to the non-rotatable component,

wherein the free portion contacts only a proximate end of the support portion adjacent to the mount portion in an unpressurized state of the leaf seal and the free portion contacts both the proximate end and a distal end of the support portion in a pressurized state of the leaf seal, the free portion being closer to the rotatable component during the pressurized state than in the unpressurized state.

28. (New) The seal assembly of claim 27, wherein each leaf seal member includes a first layer including a first material addressing a high pressure side of the leaf seal and a second layer of a second material addressing a low pressure side of the leaf seal,

wherein the first material has a lower coefficient of thermal expansion than the second material.

29. (New) The seal assembly of claim 27, wherein the support portion includes a curved surface extending from the proximate end of the support portion to the distal end.

30. (New) The seal assembly of claim 29, wherein the free portion extends tangentially from the curved surface in the unpressurized state.

31. (New) The seal assembly of claim 27, wherein the plurality of staggered leaf seal members are provided by a spiral of a single strip of material.

32. (New) The seal assembly of claim 27, wherein the plurality of staggered leaf seal members are fixed together at the fixed portion by a weld.

33. (New) The seal assembly of claim 27, wherein the fixed portion is positioned substantially parallel to a radial axis of the non-rotatable component, and the free portion is angled out-of-plane relative to the fixed portion.

34. (New) The seal assembly of claim 27, wherein the distal end of the support portion is thinner than the proximate end of the support portion.

35. (New) The seal assembly of claim 27, further comprising a holder for mounting the seal assembly to the non-rotatable component, wherein the holder includes a projection for protecting the free portion.

36. (New) The seal assembly of claim 27, wherein the fixed portion is provided by an arcuate member in each leaf seal member.

37. (New) A rotary machine comprising:

- a rotatable component and a non-rotatable component, the components lying about a common axis;

- a seal assembly between the components, the seal assembly including:

- a leaf seal including a plurality of staggered leaf seal members, each leaf seal member including:

- a free portion arranged at an acute angle relative to the longitudinal axis of the rotatable component, and

- a fixed portion that is angled relative to the free portion; and

- a support having a substantially frusto-conically shaped support portion facing a high pressure side of the leaf seal for supporting the free portion from a radially inward position relative to the free portion and a mount portion for coupling to the non-rotatable component,

- wherein the free portion contacts only a proximate end of the support portion adjacent to the mount portion in an unpressurized state of the leaf seal and the free

portion contacts both the proximate end and a distal end of the support portion in a pressurized state of the leaf seal, the free portion being closer to the rotatable component during the pressurized state than in the unpressurized state.

38. (New) The rotary machine of claim 37, wherein each leaf seal member includes a first layer including a first material addressing a high pressure side of the leaf seal and a second layer of a second material addressing a low pressure side of the leaf seal, wherein the first material has a lower coefficient of thermal expansion than the second material.

39. (New) The rotary machine of claim 37, wherein the support portion includes a curved surface extending from the proximate end to the distal end.

40. (New) The rotary machine of claim 37, wherein the distal end of the support portion is thinner than the proximate end of the support portion.